

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 3

DATED 3/05/2004

Control	0049-02-009, ETC.
Project	NH 2004(261)
Highway	SH 6
County	FALLS, ETC.

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an addendum notification which details the changes and the respective proposal pages which were added and/or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped "This Proposal Issued for Informational Purposes."

You are required to acknowledge receipt of this addendum by entering the date, which appears at the top of this letter on the Addendum Acknowledgement Form, contained in your bid proposal.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

04/99

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: NH 2004(261)

CONTROL: 0049-02-009

COUNTY: FALLS

LETTING: 03/10/2004

REFERENCE NO: 0305

PROPOSAL ADDENDUMS

— PROPOSAL COVER

— BID INSERTS (SH. NO.:

X GENERAL NOTES (SH. NO.: D AND J

— SPEC LIST (SH. NO.:

— SPECIAL PROVISIONS:

ADDED:

DELETED:

— SPECIAL SPECIFICATIONS:

ADDED:

DELETED:

— OTHER:

DESCRIPTION OF ABOVE CHANGES

(INCLUDING PLANS SHEET CHANGES)

GENERAL NOTES, PAGES D AND J, AND PLAN SHEETS 7A THROUGH 7H:

DELETED ITEMS 100 AND 132 NOTES.

DELETED 4TH PARAGRAPH UNDER ITEM 504 AND ADDED NEW NOTE TO ITEM 504.

ADDED ITEM 580.

DUE TO ABOVE CHANGES, ALL INFORMATION SHIFTED.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

SPECIFICATION DATA
GRADING REQUIREMENTS

Gradation for Flex Base (Type A, Grade 6)

Sieve Size	2"	1 1/2"	#4	#40	PI Max	PI Min
Percent Retained	0	0-10	45-75	70-85	12	4

1. This material shall be produced from a source which when tested in accordance with test method TEX-117-E, PART 1, shall meet the requirements of class **1.0** material.
2. This material shall be produced from a source which when tested in accordance with test method TEX-116-E, the maximum wet ball mill value shall not exceed 45 and the maximum increase of material passing the No. 40 sieve shall not exceed 20 percent.
3. Job control samples for gradation and P.I. testing will be taken from the windrow after blade mixing.

(PERCENT RETAINED-SIEVE)

DESCRIPTION	1 1/2"	1 1/4"	5/8"	#4	#40	PI MAX
ASPH STAB BASE (GRADE 4)	0	0-10	10-45	40-65	70-80	10

The material passing the No. 200 mesh sieve shall generally be limited to 1/3 of the material passing the No. 40 mesh sieve.

BASIS OF ESTIMATE

ITEM	DESCRIPTION	RATE	BASIS	QUANTITIES
168	VEGETATIVE WATERING	39.30 MG/AC	328.40 AC	12,906.00 MG
247	FLEX BASE (COMPL IN PLAC) (TY A GR 6 CL 2)	140.00 LB/CF	4937057.14 CF	346,060.00 TON
247	FLEX BASE (COMPL IN PLAC) (TY D GR 6 CL 2)	140.00 LB/CF	1326114.29 CF	92,828.00 TON
260	LIME (TY A (SLRY) TY B, TY (C) DRY OR (SLRY)	54.00 LB/SY	6,553,333.33 SY	17,694.00 TON
310	ASPH MATL (MC-30)	0.20 GAL/SY	528,410.00 SY	105,682.00 GAL
316	SURFACE TREATMENT AGGR (TY B GR 4 or LT WT GR 4) 1/110 CY/SY	519,642.86 SY	4724.00 CY	
	ASPH (AC-15P)	0.35 GAL/SY	519,642.86 SY	181643.00 GAL

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

580	PROJECT MAINT (MOWING)	2 CYCLES/YEAR	3 YEARS	6 CYCLES
3146	HOT MIX (TY B) (BASE) (PG64-22)	330 LBS/SY	503,527.27 SY	83,082 TON
3146	HOT MIX (TY C) (PG 70-22S)	220 LBS/SY	494,218.18 SY	54298 TON
3146	HOT MIX (TY D) (SURF) (PG 64-22)	110 LBS/SY	4,254.55 SY	234 TON
3378	SMA (SMA-D SAC-A PG 76-22) (S or TR) 220 LBS/SY		471,000.00 SY	51,810 TON

GENERAL NOTES

Fiber optic cable systems may be buried on the railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. The state and/or its contractor shall telephone the railroad during normal business hours (7:00 a.m. to 9:00 p.m., Central Time, Monday through Friday, except holidays) at 1-800-336-9193 (also a 24-hour, seven-day number for emergency calls) to determine if fiber optic cable is buried on the railroad's premises to be used by the state. If it is, the state and/or its contractor will telephone the telecommunications company(ies) involved, arrange for a cable locator and make arrangements for relocation or other protection of the fiber optic cable prior to beginning any work on the railroad's premises.

TxDOT and Union Pacific Railroad (UPRR) have agreed to common ditch use on UPRR right-of-way. The contractor shall perform grading work as shown on the plans, including tree and brush clearing, on UPRR right-of-way. Roadways and driveways that cross the railroad tracks and intersect SH6 shall be vertically realigned as required, re-graded and resurfaced to a point 10'-0" from the center of railroad tracks. The contractor shall not perform any work within 25' of the centerline of the railroad tracks unless a railroad flagman is present. The contractor shall not perform any work that may undermine the railroad track side slope/embankment. The provisions of **Item 7.14** of the TxDOT Standard Specifications shall apply to all work within UPRR right-of-way.

All elevations are based on USC & GS datum.

Bench mark locations and elevations are shown on the plan profile sheets.

The contractor shall not begin a phase of work before having a quantity of tested and approved materials that, in the opinion of the engineer is adequate for the scope of work proposed.

In those cases where fixed features require, the governing slopes indicated herein and on the cross sections may be varied between the limits and to the extent determined by the engineer.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

Where existing pavement adjoins new pavement, the existing pavement shall be sawed to a neat transverse and/or longitudinal line to permit adequate joining. This will not be paid for directly, but will be considered subsidiary to the various bid items.

Prior to final acceptance, all new structures and/or structures that have been extended shall be cleaned out by the contractor. This work will not be paid for directly but shall be considered as subsidiary to the various bid items.

Throughout the course of the project, when in the opinion of the engineer, tall grass and weeds affect the safety of the public by restricting visibility, interfere with normal traffic flow or appear unsightly, the contractor shall be required to mow same. Final cleanup will include mowing of grass and weeds. This work will be paid for in accordance to **Item 580 "Project Maintenance."**

When construction operations necessitate the moving of mailboxes, the contractor shall place them on a temporary mount at nearby locations and upon completion of the project, final placement will be as located by the engineer. This work will not be paid for directly, but shall be subsidiary to the various bid items.

Prior to contract letting, reproducible earthwork cross sections will be available at the office of the area engineer for borrowing by copying-service companies for the purpose of making copies for the prospective bidders, at the prospective bidder's expense, or this data can be furnished on a compact disc.

The contractor shall be responsible for marking stations every 100 feet and shall maintain the markings for the duration of the project.

Mixing of materials, storing of materials, storing of equipment, or repairing of equipment on top of concrete pavement or bridge decks will not be permitted unless specifically authorized by the engineer. Permission will be granted to store materials on surfaces if, in the opinion of the engineer, no damage or discoloration will result.

References to manufacturers' trade name or catalog numbers are for the purpose of identification only and the contractor will be permitted to furnish like materials of other manufacturers provided they are of equal quality and comply with specifications for this project and are approved by the engineer.

All materials, labor and incidentals required for the contractor to provide for traffic across the highway and for all weather ingress and egress to public and private property in accordance with ARTICLE 7.7 of the standard specifications shall be considered as incidental to the various bid items. When construction is completed the access roadways will be restored to their original condition, as approved by the engineer.

Personal vehicles of the contractor's employees shall not be parked within the right-of-way at anytime including any section closed to public traffic, unless the vehicle is being utilized for construction procedures. However the contractor's employees may park on the right-of-way at the sites where the contractor has his office, equipment and materials storage yard.

The contractor shall not begin work on the roadway until 30 minutes after sunrise and all machines shall be off the road by 30 minutes before sunset.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

Prior to beginning any excavation work in the area of existing utilities, the contractor shall contact the utility companies for exact locations to prevent any damage or interference with present facilities. The TEXAS ONE CALL system shall be notified at the following toll-free number: (1-800-245-4545). This action shall in no way be interpreted as relieving the contractor of his responsibilities, under the terms of the contract and as set out in the plans and specifications. The contractor shall repair any damage caused by his operations, at his own expense and shall restore facilities to service in a timely manner.

The contractor shall clean all bridge joints and bent caps of all loose foreign material by blowing with compressed air or by other methods approved by the engineer prior to acceptance. The cleaning of joints and bent caps will not be paid for directly, but shall be considered subsidiary to the various bid items.

The contractor's attention is called to the fact that all adjoining pavement sections shall be protected during all phases of construction and any damages incurred due to contractors operation shall be repaired and/or replaced at the contractor's expense.

The contractor shall have a Sign Crew Field Book on the project at all times. The Sign Crew Field Book may be purchased from the Traffic Operations Division. Traffic Operations Division may be contacted by telephone at 512-416-3134.

ITEM 104: REMOVING CONCRETE

The existing concrete pavement removed in accordance with this item is to be recycled back into the roadway.

ITEM 168: VEGETATIVE WATERING

The Vegetative Watering shall consist of water applied at a rate of a $\frac{1}{4}$ inch per acre every 2 weeks for a period of 3 months, unless otherwise directed by the engineer. The quantity of Vegetative Watering shown on the plans reflects the amount required for both the temporary and the permanent seeding.

ITEM 180: WILDFLOWER SEEDING

For this contract, the contractor shall mark, flag, or suitably delineate the areas to receive wildflower planting prior to seeding operations to the satisfaction of the engineer. Wildflower seeding operations shall be performed between September 15 and November 30 unless specifically authorized or directed by the engineer. The contractor shall repair or replant, to the satisfaction of the engineer, all wildflower areas which have been damaged by the contractor's action.

Seed shall be incorporated into the soil with a drill-type seeder specifically calibrated for each type of seed.

Commercial fertilizer will not be applied in areas where wildflowers are seeded.

Common Name	Scientific Name	Min. Germ.
Texas Bluebonnet	Lupinus texensis	60%
Indian Blanket	Gaillardia pulchella	80%

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

Black-eyed Susan	Rudbeckia hirta	80%
Clasping Coneflower	Rudbeckia amplexicaulis	80%
Lemon Mint	Monarda citriodora	80%
Plains Coreopsis	Coreopsis tinctoria	80%
Gay Feather	Liatris pycnostachya	50%
Mexican Hat	Ratibida columnaris	70%

Equal amounts of each seed variety shall be used.

In accordance with the wildflower planting mixture and rates as specified a total of 20 pounds of pure live seed (PLS) per acre. Pure live seed is defined as purity multiplied by germination. Germination shall include hardseed and/or firmseed and/or dormant seed as determined by an approved certified seed testing laboratory.

In case a wildflower species cannot be obtained in the required quantities an equal unit price amount of another species shall be substituted. The substituted species will be chosen by the engineer.

ITEM 247: FLEXIBLE BASE

The material will be placed in approximately equal courses not to exceed 8 inches in depth per course. During mixing and laying operations, sufficient water shall be added to the material to insure that the moisture content is not less than optimum moisture as determined by test method TEX-114-E.

The existing concrete pavement removed in accordance with this item is to be recycled back into the roadway as flexible base. The contractor will be required to set up a portable crushing plant in the vicinity of the project. The contractor will be required to submit, for the Engineer's approval, a written description of the methods and equipment to be used to process the existing concrete pavement so that it meets the requirements of **ITEM 247, "FLEXIBLE BASE"** as specified herein except as otherwise authorized by the Engineer. Crushed Concrete Flexbase will be uniformly incorporated into the lower Flexbase lift of the Southbound Roadway. Crushed Concrete Flexbase will be paid for by the ton in accordance with **ITEM 247, "FLEXIBLE BASE"**. The portion of the existing concrete pavement not suitable for recycling will become the property of the contractor and will be disposed of to the satisfaction of the Engineer.

ITEMS 247, 3146 & 3378: FLEXIBLE BASE, QUALITY CONTROL/QUALITY ASSURANCE OF HOT MIX ASPHALT AND STONE MATRIX ASPHALT (SMA)

The platform scales shall be equipped with a printing devise capable of clearly printing the gross, tare and net weight of each load subject to the approval of the engineer.

ITEM 251: REWORKING BASE MATERIAL

Scarifying shall consist of reclaiming.

The reclaiming shall be performed with a 375 HP CATERPILLAR MODEL RR-250 RECLAIMER, a BOMAG MODEL 125 RECLAIMER, or a suitable approved alternate.

The Limestone Flexbase shoulder material on the Southbound Roadway is to be scarified, reclaimed, and temporarily stockpiled.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

The contractor will be responsible for providing a location for the temporary stockpile. Upon completion of the subgrade, the salvaged Flexbase will be uniformly incorporated into the lower Flexbase lift of the Southbound Roadway. Salvaged Flexbase will be paid for by the ton in accordance with **ITEM 247, "FLEXIBLE BASE"**.

ITEM 260: LIME TREATMENT FOR MATERIAL USED AS SUBGRADE (ROAD MIXED)

The contractor will be required to weigh approximately five (5) percent of all truckloads or shipments of lime, which are eligible for payment on the project. Weighing shall be performed on certified public scales located at or near the project site in the presence of department personnel. The truckloads or shipments of lime, which are to be weighed, shall be selected in a random manner as determined by the engineer. Documentation from the certified public scales must show gross, tare and net weights. The producer's delivery ticket must also show gross, tare and net weights. The contractor shall make every reasonable effort to see that the lime trailers are completely emptied at the project site.

The cost of this operation will not be paid for directly, but shall be considered incidental to the appropriate bid item.

ITEM 302: AGGREGATES FOR SURFACE TREATMENTS

Material produced by test method TEX-217-F PART II, passing the No. 40 sieve, is restricted to no more than 1% by weight.

ITEM 316: SURFACE TREATMENTS

The seal coat will be required to cure 3 days or unless otherwise approved by the engineer prior to overlaying with HMAC.

All trucks hauling materials to be paid for by truck measurement shall be "struck off" prior to delivery to the project.

No asphalt for surface treatment items will be placed between October 1 and May 1 for AC unless specifically directed by the engineer in writing.

ITEM 345: ASPHALT STABILIZED BASE (PLANT MIX)

That part of the mineral aggregate retained on the No. 10 sieve shall be tested in accordance with test method TEX-406-A and the loss by decantation shall not exceed 2% when sampled from the hot bin or 3% when sampled from the cold feed or stockpile.

The mixture proposed for use shall be evaluated for moisture susceptibility in the mixture design stage by test method TEX-530-C, unless otherwise directed by the engineer. For production testing and monitoring, test method TEX-530-C will be used to evaluate the mixture for moisture susceptibility. Maximum stripping of 0% is required. If more than 0% stripping occurs, additional anti-stripping agent may be required.

The minimum slow strength shall be 40 PSI.

In place compaction control will be by ordinary compaction.

The aggregate shall meet the quality requirements shown in TABLE 1 as specified in ARTICLE 345.2(1) (C).

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

ITEM 354: PLANING AND/OR TEXTURING PAVEMENT

The top 2" of the existing Southbound Roadway consists of Crushed "D" Hotmix and Multiple Seal coats in good condition. The designated stockpile location is Sta 733+00 RT. to 743+00 RT. At contractor's option, this material may be used, at no cost to the contractor, in the production of the Type "B" and Type "C" Hotmix required for the project.

The lower 2" (approx.) of the existing Southbound Roadway consists of Slick "D" Hotmix in poor condition. This material is to be milled from the roadway by the contractor and placed in trucks provided by others. No hauling will be required.

ITEMS 420 & 421: CONCRETE STRUCTURES & PORTLAND CEMENT CONCRETE

The contractor shall remove the test specimens from the curing tank and transport the test specimens to the testing machine and dispose of the test specimens after testing.

ITEM 400: EXCAVATION AND BACKFILL FOR STRUCTURES

CLASS B bedding shall be required if rock is encountered.

ITEM 420: CONCRETE STRUCTURES

Radiographic inspection shall be required for all major welds on false work as directed by the engineer and shall be done by the contractor at his expense. Headwall heights will be reduced, if necessary, to provide a maximum of 3 inches projection above the roadway slope. No increase or decrease will be made in plan quantities of concrete or reinforcing steel for this work.

ITEM 427: SURFACE FINISHES FOR CONCRETE

Bridge structures shall receive a SURFACE AREA II CLASS B TY II finish.

All culverts shall receive a SURFACE AREA I CLASS C finish.

**ITEMS 462, 464 AND 467: CONCRETE BOX CULVERTS, REINFORCED
CONCRETE PIPE AND SAFETY END TREATMENT**

All removal of existing pipe, structural excavation and backfill required to perform the work will not be measured for payment and shall be considered subsidiary to the appropriate bid item, unless specified in the plans.

ITEMS 432: RIPRAP

Concrete required for riprap is designated as "miscellaneous concrete". It will be accepted based on minimum 7-day flexural strength of 280 psi.

The slump shall be less than 4". Concrete represented by failing strength test shall be removed and replaced at contractor's expense.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

ITEM 502: BARRICADES, SIGNS AND TRAFFIC HANDLING

For pedestrian safety, plastic construction fencing, a minimum of 4 feet high, shall be used around open excavations.

Advisory speed plate (CW13-1) shall be placed as directed by the engineer. Signs (CW13-1) shall not be used with any signs other than a warning sign, nor shall it be used alone. Recommended speed and sign placement shall be in accordance with the 2003 Texas Manual on Uniform Traffic Control Devices (MUTCD). Signs mounting height shall be seven (7) feet minimum to the bottom of the speed plate.

Work zone speed limit signs shall be covered with a commercial grade sign cover or removed when work activities allow as directed by the engineer. Turning signs from view, laying signs over or down will not be allowed. The contractor will coordinate changes in speed limit signs with law enforcement.

A meeting between the contractor and Engineer to discuss upcoming changes in construction phasing and traffic switches is required at least 14 days prior to the phase change. Items to be discussed at this meeting include temporary signing, traffic control, pavement markings, the processes necessary for the phase change and subcontractor scheduling.

All safety appurtenances such as signs, delineators, object markers, and route markers shall be in place prior to opening each phase of construction to traffic.

The contractor shall have an ATSSA certified traffic control specialist assigned to this project. Certifications shall be submitted to the engineer prior to construction.

The contractor's responsible person shall be available on the project, within a 30 minute response time, 24 hours a day, 7 days a week to handle emergencies.

All flaggers used on this project shall be qualified to perform flagging duties as specified in SP 008---244. A list of qualified flaggers shall be provided to the engineer prior to beginning any road work activities which require flagging. Any modification to this list shall be provided to the project engineer. The flagger will be equipped with a slow-stop paddle in lieu of the standard flag.

Unless otherwise shown on plans, where there is excavation adjacent to the pavement edge, the contractor shall provide adequate warning signs, vertical panels, drums and reflectors at the pavement edge as directed by the engineer. Pavement dropoffs created by ACP operations shall be treated in a similar manner and in accordance with the details shown in the plans.

When excavation is required next to a travel lane carrying traffic and widening is not completed by the end of the day's operation, and unless otherwise permitted in the plans, sufficient backfill shall be placed against the edge of the travel lane in order to provide a 1V:3H slope. The backfill used by the contractor shall be durable crushed stone type of flexible base or other materials approved by the engineer. When work is resumed on this excavated area then this backfill material shall be incorporated into the road work or disposed of by the contractor as approved by the engineer. Materials and labor for this work will not be paid for directly but shall be subsidiary to the various bid items.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

Type III barricades and road closed signs as shown on the BC standard sheets shall be placed across the closed roadway or the new location at each road, street and/or closed bridge and along the closed roadway or new location at $\frac{3}{4}$ mile intervals.

All work required by these general notes, except as provided for by item 502, will not be paid for directly, but shall be subsidiary work to item 502 unless otherwise shown in the plans.

Unless otherwise approved by the engineer, lane closures for minor or major construction operations will not be allowed on Good Friday, Easter Weekend, Memorial Day, Memorial Day Weekend, July 4th, Labor Day, Labor Day Weekend, Wednesday before Thanksgiving Day thru Sunday, Christmas Eve, Christmas Day, New Year's eve, New Year's day, or any other high traffic days or holidays as determined by the engineer.

All construction activities and equipment shall be regulated so as to cause a minimum of inconvenience to the traveling public. At points where it is necessary for trucks to stop, load or unload, warning signs and flaggers shall be provided to protect the traveling public.

ITEM 504: FACILITIES FOR FIELD OFFICE AND LABORATORY

For this project, the contractor shall furnish one field office TYPE E structure. This building shall not be less than 8 feet by 16 feet and 8 feet high or an approved equivalent and shall have not less than four glass windows and one door. A workbench and a table, each 3 feet wide and 6 feet long, shall be provided.

All parking lots shall be of the size and type as directed by the engineer.

No fencing shall be required.

A telephone shall be installed in the field office at the contractor's expense. The monthly charges shall be the responsibility of the contractor. This will not be paid for directly, but shall be considered subsidiary to various bid items.

The contractor shall furnish, for the engineer's exclusive use, a laboratory meeting the specified TYPE "D" structure. The building shall be located at the contractor's plant site and be separate from the contractor's laboratory.

The laboratory structure shall have a minimum ceiling height of 8 feet and provide a minimum of 400 square feet of gross floor area for a permanently located asphalt plant. For temporary located plants serving one project, a temporary structure with a minimum of 200 square feet of gross floor area is acceptable. The floor area shall be partitioned into a minimum of two interconnected rooms; each room furnished with an exterior door and a minimum of two windows. A built-in equipment storage cabinet, for the storage of nuclear equipment, with the minimum dimensions of 3 feet wide by 2 feet deep by 3 feet high and shall have provisions for locking securely. The floor shall have sufficient strength to support the testing equipment. The walls and covering shall be structurally sound and impervious. Portable structures shall be support blocked for stability and shall be tied down. The laboratory shall be adequately air-conditioned and be furnished with a minimum of one (1) desk, three (3) chairs and a telephone (with a line separate from that of the contractor). The structure shall be provided with a 240-volt electrical entrance service utilizing a minimum of three (3) No. 4 wires.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

The service shall consist of a minimum of four (4) 120-volt circuits with 20 amp breakers and no more than two (2) grounded convenience outlets per circuit and provisions for a minimum of two (2) 220-volt ovens with vents to the outside. The structure shall have a minimum of two (2) convenience outlets per wall and a source of potable water with pressurized (20 psi) spray attachments. (i.e. standard sink with spray head attachment)

For electrical work TYPE D asphalt mix laboratory and construction site field office which will also include electrical service to said buildings, electrical license requirements will be as outlined in special provision to **ITEM 8, "PROSECUTION AND PROGRESS"** ARTICLE 8.3(1) (b).

The use of space heaters for the purpose of heating the structure is unacceptable. The building must be structurally sound and pose no safety hazards. The laboratory must meet all the above requirements within two (2) weeks prior to beginning of work.

ITEM 540: METAL BEAM GUARD FENCE

This work shall be planned and executed in such a manner that no postholes shall be left uncovered and no ends of rail elements shall be left unattached at the end of the workday.

Steel posts shall be driven unless otherwise directed by the engineer.

ITEM 542: REMOVING METAL BEAM GUARD FENCE

The designated site for removed sections of guard fence and posts shall be the FALLS COUNTY MAINTENANCE YARD located one half mile east of SH 6 bypass on SH 7, east of Marlin.

ITEM 580: PROJECT MAINTENANCE

Throughout the course of the project, when in the opinion of the engineer, tall grass and weeds affect the safety of the public by restricting visibility, interfere with normal traffic flow or appear unsightly, the contractor shall be required to mow same. Final cleanup will include mowing of grass and weeds. This work will be paid by the cycle.

Regular sweeping of dirt or mud due to construction operations from the travel ways will not be paid for directly but shall be subsidiary to the various bid items.

ITEM 618: CONDUIT

The contractor may, at his/her option, substitute HDPE conduit meeting the specifications of ITEM 622, "DUCT CABLE" for all bores requiring PVC SCHEDULE 40 conduit and when approved by the engineer, may substitute HDPE for SCHEDULE 80 bored conduit. HDPE shall be the same size as the PVC conduit shown on the plans. HDPE shall be terminated with UL listed fittings. HDPE may be threaded and used with threaded PVC connections or couplings. HDPE shall be extended through the bore in one continuous piece and shall be coupled to RMC elbows or to PVC conduit at the bore pits prior to entering ground boxes (if ground boxes are required by the plans). HDPE shall not contain conductors during installation in this manner.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

No additional compensation will be paid to the contractor when HDPE is substituted for this purpose.

PVC conduit systems that snap or lock together without glue that are designed and UL listed to be used for bored PVC electrical conduit applications will be allowed for bored PVC SCHEDULE 40 and when approved by the engineer, will be allowed for bored PVC SCHEDULE 80. No Additional compensation will be paid to the contractor when specific purpose conduit systems are substituted for this purpose.

Bell end fittings shall be used at ends of all non-metallic conduits (e.g., in ground boxes). Where a threaded connector is used (e.g., in metal junction box), a grounding bushing shall be installed.

For all conduit placed by trenching, trenching and back filling shall be according to ITEM 400, "EXCAVATION AND BACKFILL FOR STRUCTURES", except for measurement and payment, in accordance with article 618.3.

All trenched conduit runs shall have a warning tape installed when back filled. The tape shall be red polyethylene marked "CAUTION-BURIED ELECTRIC LINE", 3 inches in width. The tape shall be placed 12 inches above the conduit. Measurement and payment shall be subsidiary to ITEM 618, "CONDUIT".

All conduit placed under existing pavement shall be bored as directed by the engineer. Cutting, trenching or jacking under existing pavement shall not be permitted without prior approval of the engineer.

Rigid metallic conduit elbows 1" and larger that are required to be installed on conduit system will not be paid for separately, but will be considered subsidiary to various bid items.

When boring is used for conduit installation, the maximum allowable over cut shall be 1 inch in diameter.

When conduit is bored, the vertical and horizontal tolerances shall not exceed 18 inches as measured from the intended target point.

The use of a pneumatically driven device for making holes beneath the pavement (commonly known as a "missile") shall not be permitted under roadways.

Bore pits shall be a minimum of 30 inches from the edge of pavement.

When back filling bore pits, the contractor must ensure that the conduit does not become damaged during installation or due to any settling of the back fill material. The contractor must compact select back fill in three equal lifts to the bottom of the conduit or if sand is used, it must be placed to a point 2 inches above the conduit. Back fill density shall be equal to the existing soil. Due care shall be exercised to prevent any material from entering the conduit.

Where non-metallic conduit is trenched through rocky soil, the conduit shall be placed on a 2-inch sand cushion and back filled with a minimum of 6 inches of sand fill.

Open ends of all conduits and raceways shall be fitted with temporary caps or plugs to prevent entry of dirt and debris during construction.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

After the conductor has been installed in the conduit system, all open ends of the conduit (i.e. in ground boxes and inside pole bases) shall be sealed with a compound approved by the engineer.

The contractor shall back fill all open trenches before the end of the workday. The contractor shall not leave any trench open overnight.

Flexible metal conduit shall not be used. All exposed conduits shall be rigid metal conduits (RMC).

If casing is required to place bored conduit, casing shall be incidental to conduit.

All conductor and conduit to be abandoned shall be removed to 1 foot below ground level. This work shall be considered incidental to the various bid items and will not be paid for directly.

ITEMS 624: GROUND BOXES

Concrete for ground box aprons will be considered miscellaneous concrete and will not need to be tested.

Ground box locations shown on the plans are approximate locations. Actual locations shall be as directed by the engineer.

ITEMS 634 & 637: PLYWOOD SIGNS (TYPE A) & ALUM SIGNS (TYPE G)

All dimensions shall be verified by the Contractor at the actual location in order to maintain dimensions as shown on the sign mounting standard sheets.

Wind bracing shall not be paid for directly, but shall be paid for as part of sign face.

The sign locations as shown on the plans are for diagrammatic purposes and show the approximate location of the signs. The location of the new signs shall be staked by the Contractor and approved by the Engineer.

Either the advance guide sign or the exit direction sign for an exit shall be in place at all times, unless prior written approval of the Engineer is given. Any signs removed by the Contractor shall be replaced before the end of the work day, unless prior written approval of the Engineer is given.

All sheeting shall conform to DMS-8300, Flat Surface Reflective Sheeting.

Sheeting for ground mounted guide signs: Legends shall be Type D (Nonfluorescent Prismatic). Backgrounds shall be Type C (high specific intensity).

ITEM 636: ALUMINUM SIGNS (TYPE A)

Sheeting for aluminum plaques and arrows attached to overhead and ground mounted guide signs shall conform to DMS-8300, Flat Surface Reflective Sheeting and be Type D (Non-fluorescent Prismatic).

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

Sheeting for Warning signs shall be Type E (fluorescent) yellow. School Warning signs shall be Type E (fluorescent) bright yellow-green. Signs with Type E sheeting shall be aluminum.

ITEM 644: SMALL ROADSIDE SIGN ASSEMBLIES

The contractor shall measure all dimensions in the field at the actual location.

Sign placement shall be in accordance with lateral and vertical clearances as shown in sign mounting details standard sheets for small roadside signs and in the sign crew field book.

Sign placement heights shall be a minimum of seven (7) feet and a maximum of seven feet six inches (7'-6") to the bottom of the sign or plaque. Mounting heights are measured as follows:

1. When the base of the sign is below the edge of the travel lane, the sign height is measured from the edge of the travel lane to the bottom of the sign.
2. When the base of the sign is above the edge of the travel lane, the sign height is measured from natural ground to the bottom of the sign.
3. When a supplemental plaque or secondary sign is used, the sign height is measured to the bottom of the supplemental plaque or secondary sign.
4. When a sign has two or more posts, all posts shall be a minimum height above natural ground to the bottom of the sign. The sign shall also be minimum height above the edge of the travel lane.

Existing sign assemblies shall remain in place until the proposed foundation and signpost are in place.

No sign foundations shall be drilled and remain open overnight. All holes drilled shall be to at least the minimum required depth with no loose material remaining in the hole.

The contractor shall stake sign locations for approval by the engineer prior to placement of signs. The contractor shall determine each post length after the stub has been placed.

For sign assemblies using the "TEXAS UNIVERSAL TRIANGULAR SLIPBASE SYSTEM MOUNTS" provide a #4 rebar at least 7 inches long through the $\frac{3}{4}$ " diameter hole in the stub to prevent the stub from rotating in the foundation as detailed on the sign mounting details for small signs.

Provide a $\frac{5}{16}$ " x $1\frac{1}{2}$ " double roll pin between the slip base casting and the sign support post to prevent the sign assembly from rotating on the stub as detailed on the sign mounting details for small signs.

Concrete for sign foundations is designated as "MISCELLANEOUS CONCRETE". It will be accepted based on a minimum 7-day flexural strength of 280 PSI. The slump shall be no greater than 4 inches.

All foundations shall be trowel finished for a neat appearance to the satisfaction of the project manager. All excess material shall be removed.

No expanded foam foundations shall be permitted.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

The slip base and the locking collar shall be tightened as shown on standard SMD (SLIP-1)-02. Bolts shall not be tightened greater than 80 foot pounds. Bolts shall be initially over-torqued to clean the threads of any galvanization that might cause an incorrect torque reading. The nuts should then be backed off and tightened to the required torque. Bolts should be torqued incrementally in a sequential manner such that load is applied uniformly to the locking collar.

The bolts used on splices shall be as shown on details A and B on the sign mounting details for small signs.

The bottom of all posts shall be cut level.

Sign types for which design details are not shown on these plans shall conform to the "STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS".

Prior to fabrication, the contractor shall submit, to the engineer for approval, six (6) sets of working drawings for all signs not specifically detailed in the standard highway sign designs (SHSD) for Texas manual. This shall include all variable dimension signs (direction, destination and street name signs). Signs fabricated incorrectly and without prior approval of the engineer shall be replaced at the entire expense of the contractor. Working drawings shall be in accordance with 634.4(1) working drawings.

ITEM 647: LARGE ROADSIDE SIGN SUPPORTS

The post lengths as shown on the plan summary sheets are an estimated length only. The length of each post for each sign shall be verified in the field by the Contractor before fabrication in order to meet actual field conditions and to provide the sign mounting heights and details shown for the typical sign installation and location on the sign mounting details standard sheets for large roadside signs.

The sign locations as shown on the plans are for diagrammatic purposes and show the approximate location of the signs. The location of the new signs shall be staked by the contractor and approved by the engineer.

Any signs removed by the contractor shall be replaced before the end of the working day, unless prior written approval of the engineer is given.

ITEM 649: REMOVING OR RELOCATING ROADSIDE SIGN ASSEMBLIES

Existing concrete foundations that are to be abandoned shall be removed. The remaining hole shall be back filled with material equal in composition and density to the surrounding area and by replacing any surface, such as asphalt pavement or concrete riprap, with like material to equivalent condition.

Removed material that is deemed salvageable (signs and posts) shall remain the property of TxDOT. The contractor shall deliver salvageable material to the TxDOT maintenance office.

Material deemed non-salvageable shall become the property of the contractor and be removed from the project.

Existing signs shall remain in place until the proposed sign post assembly is completed and ready for sign installation.

County: FALLS, ETC**Control:** 0049-02-009, ETC**Highway:** SH 6

Existing sign assemblies that are moved to a temporary support will be paid for as "Item 649 Relocating Sign Assembly". Moving the temporary supports for accommodating work and relocating for subsequent phases will not be paid for directly. The existing sign assemblies requiring relocation to a temporary support must be approved by the Engineer.

ITEM 662: WORK ZONE PAVEMENT MARKINGS

Removable work-zone pavement markings on final pavement surfaces shall be removable tape supplemented by raised reflective pavement markers. These raised pavement markers will not be paid for directly but will be subsidiary to this item.

ITEM 666: REFLECTORIZED PAVEMENT MARKINGS

Beads shall be applied using a single drop application process. The application rate shall be 12 pounds per 100 square feet of thermoplastic pavement marking material.

The beads used on this project shall be Type III and meet the requirements of departmental materials specification DMS-8290, glass traffic beads.

Beginning and ending points of No Pass Zones will be verified by the engineer. Prior to application of pavement markings, pavement surfaces shall be cleaned sufficiently to remove all forms of contamination and loose materials, in accordance with ITEM 678, "PAVEMENT SURFACE PREPARATION FOR MARKINGS". This work shall not be paid for directly, but shall be subsidiary to ITEM 666, "REFLECTORIZED PAVEMENT MARKINGS".

All stop lines shall be twenty-four (24) inches wide.

Markings placed that are not in alignment or sequence, as shown on the standard sheets or as stated in the specifications, or do not meet the specification and/or approval of the Project Manager, shall be removed by the Contractor at the Contractor's expense. Removal shall be in accordance with ITEM 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS", except for measurement and payment.

ITEM 668: PREFABRICATED PAVEMENT MARKINGS

All Word and Arrow markings shall be Type C prefabricated pavement markings (TxDOT Spec DMS-8240).

ITEM 672: RAISED PAVEMENT MARKINGS

TYPE II-C-R markers for lane lines shall be placed on 80 feet centers regardless of the conditions listed on standard sheet PM(3).

Existing raised pavement markers to be replaced shall be removed at the same time that the new markers are placed (i.e. remove and replace in one operation). Existing raised pavement markers replaced by new markers shall be removed in accordance with ITEM 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS". The damaged area in the pavement due to the removal of existing markers shall be immediately filled with a bituminous material as approved by the Project Manager. This removal and backfill work shall not be paid for directly, but shall be subsidiary to ITEM 672, "RAISED PAVEMENT MARKERS".

County: FALLS, ETC**Control:** 0049-02-009, ETC**Highway:** SH 6

Prior to application of pavement markers, pavement surfaces shall be cleaned sufficiently to remove all forms of contamination and loose materials, in accordance with ITEM 678, "PAVEMENT SURFACE PREPARATION FOR MARKINGS". This work shall not be paid for directly, but shall be subsidiary to ITEM 672, "RAISED PAVEMENT MARKERS".

Pavement markers placed that are not in alignment or sequence, as shown on the standard sheets or as stated in the specifications, or do not meet the specification and/or approval of the Project Manager, shall be removed by the Contractor at the Contractor's expense. Removal shall be in accordance with ITEM 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS", except for measurement and payment.

All raised pavement markers placed on concrete surfaces shall be mounted using an epoxy adhesive, in accordance with article 672.4.

ITEM 677: ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS

Pay item for eliminating existing raised pavement markers is for operations of removal only with no marker replacement.

ITEMS 3146: QUALITY CONTROL/QUALITY ASSURANCE OF HOT MIX ASPHALT

The mixture proposed for use shall be evaluated for moisture susceptibility in the mixture design stage by test method TEX-530-C, unless otherwise directed by the engineer. For production testing and monitoring, test method TEX-530-C will be used to evaluate the mixture for moisture susceptibility. Maximum stripping of 0% is required. If more than 0% stripping occurs, additional anti-stripping agent may be required.

ITEMS 3146 & 3378: QUALITY CONTROL/QUALITY ASSURANCE OF HOT MIX ASPHALT AND STONE MATRIX ASPHALT (SMA)

Lot size shall be 3,000 tons.

The Contractor will provide one employee to the State for the duties of Hot Mix Ticket Writer. His responsibilities will include receiving each individual Hot Mix Ticket from the transport drivers upon delivery, immediately signing each ticket, placing station number on ticket and lane location on referenced ticket. This person will be available each day of hot mix operations. The Quantity of Hot Mix to be paid for this item will be the total of the quantity shown on the tickets delivered to the Inspector at the end of each day.

The placement pay factors for shoulders, placed separately from the travel lanes, shall be based on in-place air void determinations.

For this contract, the contractor shall provide a continuous flow of material to the paver by means of a self-propelled MATERIAL TRANSFER VEHICLE (MTV). The (MTV) shall consist of a mobile hopper with a sufficient storage capacity and conveyor that will provide a non-stop placement of asphaltic concrete pavement on the main lanes and shoulders. The MTV shall have a system of augers or other approved systems to remix the mixture during the transfer process. The engineer shall approve the MTV before use. This is required to minimize segregation and improve the ride quality.

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

Only that reclaimed asphalt pavement (RAP) generated from this project will be allowed.

Any Truck Bed Releasing Agent shall be approved by the Engineer. Diesel shall not be used as a Truck Bed Release Agent. Any transporting operation that results in contamination of Hot Mix with foreign materials will not be allowed.

Hydrated lime shall be added to the asphaltic mixture as an additive to improve quality of mixture. The lime shall be added at a rate of 1.0% by weight of the total aggregate. The lime shall meet the requirements of TYPE A, hydrated lime, or TYPE B, commercial lime slurry under **ITEM 264, "LIME AND LIME SLURRY"**. The lime shall be added to the fine aggregate, pug mill mixed and stockpiled a minimum of 24 hours prior to introduction to mixing plant. Other methods of adding lime that produce comparable results and that are acceptable to the engineer may be considered. Lime shall not be paid for directly, but shall be considered as subsidiary to various bid items.

For this project, the spreading and finishing machine shall be equipped with an approved automatic dual longitudinal screed control system and automatic transverse screed control system.

ITEM 3378: STONE MATRIX ASPHALT

For SMA-D, Medium: Asphalt Binder will be PG 76-22 (S or TR).

The course aggregates to be used in surface courses shall have a minimum surface aggregate classification requirement of CLASS A for all travel lanes.

Coarse Aggregate Quality Requirements are adjusted from the specification as shown below:

Coarse Aggregate Quality Requirements

Property	Test Method	SMA-D
Deleterious Material, % Max	Tex-217-F , Part I	1.0
Decantation, % Max	Tex-217-F , Part II	1.0
Los Angeles Abrasion, % Max	Tex-410-A	35
Magnesium Sulfate Soundness Loss, 5 Cycle, % Max	Tex-411-A	25
Micro-Deval Loss, % Max	Tex-461-A	20 (See note 2)
Coarse Aggregate Angularity 2 Crushed Faces, % Min	Tex 460-A, Part I	95
Flat and Elongated Particles @ 3:1, % Max	Tex-280-F	10

County: FALLS, ETC

Control: 0049-02-009, ETC

Highway: SH 6

ITEM 5004: TEMPORARY EROSION, SEDIMENTATION AND WATER POLLUTION PREVENTION CONTROL

The contractor shall schedule the work in such a manner so that seeding and/or sodding may be performed as soon as possible. This will require the contractor to mobilize for each area as directed by the engineer.

Vegetative buffer zones shall be delineated as directed by the engineer

The SW3P for this project shall consist of using the following items as directed by the engineer:

COMPOST MANUFACTURED TOPSOIL
TEMPORARY SEDIMENT CONTROL FENCE
EROSION CONTROL LOGS
ROCK FILTER DAMS
BACKHOE WORK (EROSN CONT)
DRILL SEED (PERM) (RURAL) (CLAY)
DRILL SEED (TEMP) (WARM)
DRILL SEED (TEMP) (COOL)
VEGETATIVE WATERING

ITEM 5880: RIDE QUALITY FOR PAVEMENT SURFACES

The ride quality for the pavement surface shall be surface test TYPE B. Pay adjustments will be per Schedule 1. Localized roughness penalties will be assessed.